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1.125(b)(2)**

1                   ADJUSTABLE FRAME FOR HOLDING PAINT ROLLER

2                   BACKGROUND OF THE INVENTION

3                   Field of the Invention:

4                   The present invention ~~is related~~ relates to frames for supporting rollers ~~which~~  
5                   ~~have cylinder body having cylindrical bodies~~ and ~~may being able to roll~~, Particularly  
6                   ~~and particularly~~, the present invention ~~is related~~ relates to a frame for supporting ~~a~~ paint  
7                   roller for coating ~~a~~ pigment or ~~a~~ paint on ~~the~~ ~~a~~ wall surface of ~~the~~ ~~a~~ building or furniture,  
8                   etc.

9                   **Technical Background Description of the Prior Art:**

10                  Usually a frame for supporting ~~a~~ paint roller has a pair of arms with generally  
11                  symmetrical ~~bending shape, each bent shapes~~. Each of the arms has its distal part  
12                  generally in parallel to the other and a shaft on the distal end to insert into ~~the~~ hole on one  
13                  of the two ends of the paint roller to support ~~and clip~~ it for rotation, ~~each~~. Each of the  
14                  arms also has its joint part ~~which is~~ fixed to or formed into a T-shape joint with a handle;  
15                  ~~the~~. The pair of joint parts form a ~~rigid holding fixed~~ length, i.e., an unchangeable  
16                  distance between the two ends of the pair of shafts, ~~it which~~ means that ~~one of~~ the frame  
17                  can ~~clamps clamp~~ and ~~holds hold~~ only one ~~longitudinal size of longitudinally sized~~

1      paint roller, that. That is to say that; a the prior art frame is not capable of fitting and  
2      holding a variety of longitudinal sizes of longitudinally sized paint rollers, which  
3      resulted results in an inconvenience in the operation with of various paint rollers.

## SUMMARY OF THE INVENTION

Having outlined the state of the prior art and its attendant shortages, the present invention's object is to provide an adjustable frame ~~which that~~ is capable of adjusting the holding length of the frame to support and clip a wide variety of ~~longitudinal sizes of longitudinally sized~~ paint rollers, moreover, the adjustment is flexible and the clipping force is strong ~~enough~~.

The present invention provides an adjustable frame for holding ~~a~~ paint roller, ~~the~~. The frame ~~comprising~~: comprises a pair of square arms ~~which have having~~ uniform ~~bending-shape bent shapes~~ and are configured symmetrically, ~~each~~. Each of the square arms includes a distal part ~~which that~~ is opposite to the other distal part, a joint part ~~which that~~ is assembled opposite to, and in line with, the other joint part, a pair of shafts ~~which that~~ are opposite to each other and are respectively fixed at the ends of the distal parts ~~to~~ insert for inserting into the ~~hole(s)~~ holes on the two ends of ~~a the~~ paint roller, and a pair of racks ~~which that~~ are opposite to each other and are respectively fixed at the ends of the joint parts; ~~and a~~. A square tube ~~which~~ is straight, ~~the square tube~~ holds ~~to~~ the pair of joint parts respectively through its two ends, and holds the pair of racks into its internal space accordingly, ~~the~~. The pair of racks meshing mesh with a gear wheel, across the gear wheel, within the internal space of the square tube; ~~and a~~. A tee-joint ~~which~~ holds ~~to~~ the square tube, ~~both~~. Both the square tube and the tee-joint have a pair of bearing holes through their walls, ~~the~~. The pair of bearing holes holding hold up a bar, to which the gear wheel is fixed, ~~and at~~. At least one knob ~~being is~~ fixed to one of two ends of the bar, outside the wall of ~~the~~ tee-joint.

An The adjustable frame for holding ~~a~~ paint roller of the present invention allows an operator to freely adjust the holding length formed by the joint parts of the square arms

1       which that are fitted into the square tube's internal space respectively through the square  
2       tube's two ends, by. By rotating the knob, through the bar and gear wheel, to move the  
3       racks move and consequently to draw the distal parts away from, or close to, each other.  
4       The operator may can change the holding length of the frame =, i.e., the distance between  
5       the two ends of the pair of shafts and fit the pair of shafts tightly against any paint roller of  
6       those with different lengths. In other words, the present invention provides a holding-  
7       length adjustable frame that is capable of flexibly and tightly clamping and holding a  
8       variety of longitudinal sizes of longitudinally sized paint rollers.

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## BRIEF DESCRIPTION OF THE DRAWINGS

2 FIG. I is a schematic front view of an adjustable frame for holding a paint roller according  
3 to the present invention;

4 FIG 2 is a section sectional view of the adjustable frame including a tee-joint, a gear  
5 wheel, a pair of racks, joint parts and joint ends of a pair of square arms, a square  
6 tube, and one of fastening set; and

7 FIG. 3 is a partially section; sectioned side view of the adjustable frame with a handle.

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## DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

2        As it is shown in Figures 1, 2, and 3, an adjustable frame for holding a paint roller  
3        ~~comprising: comprises~~ a pair of square arms 2 and 4 ~~which have having~~ uniform  
4        ~~bending-shape, each bent shapes. Each of the pair of~~ square arms 2 and 4 includes a  
5        distal part ~~which that~~ is in parallel to the other distal part, a joint part ~~which that~~ is  
6        assembled opposite to, and in line with, the other joint part, a pair of shafts 3 ~~which that~~  
7        are opposite to, and in line with, each other and are respectively fixed at the ends of the  
8        distal parts ~~to insert for inserting~~ into the ~~hole(s) holes~~ on the two ends of a ~~the~~ paint  
9        roller (not ~~be~~ shown), and a pair of racks 8 ~~and 12~~ ~~which that~~ are opposite to each other  
10      and are respectively fixed at the ends of the joint parts: ~~and a.~~ A square tube 1 ~~which~~ is  
11      straight, ~~the square tube 1 holds to the pair of joint parts square arms~~ 2 and 4  
12      respectively through its two ends, and holds the pair of racks 8 ~~and 12~~ into its internal  
13      space accordingly, ~~the.~~ The pair of racks 8 ~~and 12~~ meshing mesh with a gear wheel 9,  
14      across the gear wheel 9, within the internal space of the square tube 1, ~~and a.~~ A tee-joint 7  
15      ~~which holds to the square tube 1, both.~~ Both the ~~pair of~~ square tube arms 2 and 4 and  
16      the tee-joint 7 have a pair of bearing holes through their walls, ~~the.~~ The pair of bearing  
17      holes ~~holding hold~~ up a bar 9', to which the gear wheel 9 is fixed, ~~and one.~~ One knob 9"  
18      ~~being is~~ fixed to one of two ends of the bar 9', ~~outside~~ the wall of tee-joint 7.

19        The racks 8 ~~and 12~~ are fixed respectively at the ends of the joint parts with screw  
20      fasteners 13 and 14.

21        The adjustable frame also ~~comprising: comprises~~ a pair of fastening sets ~~which~~  
22      ~~that~~ are configured respectively at the two ends of the square tube 1, ~~each.~~ Each of the  
23      ~~pair of fastening~~ sets includes an inner pipe 5 ~~which has having~~ male screw threads on  
24      its outer wall and an outer pipe 6 ~~which has having~~ female screw threads on its cone-

1        shaped inner wall cone-shaped, the. The inner pipe 5 holding to holds both the square  
2        tube 1 and the joint part of the an associated square arm 2 or 4, the. The outer pipe 6  
3        fitting fits the inner pipe 5 to enhance the holding force between the square tube 1 and the  
4        joint parts part of the associated square arm 2 or 4.

5              The tee-joint 7 includes a screw socket 15 which has having female screw threads  
6        on its inner wall to couple with a handle 11 and has male screw threads on its cone-  
7        shaped outer wall cone-shaped to couple with a screw tube 10 having female screw  
8        threads on its inner wall.

9              Before or after a coating operation, the operator may loose loosen the outer pipe 6  
10       from the inner pipe 5 by rotating it, then rotate the knob 9" and consequently the gear  
11       wheel 9 to move moves the pair of racks 8 and 12 and to bring the pair of ends of the  
12       pair of shafts 3 away from, or close to, each other in order to adjust the holding distance  
13       between the pair of shafts 3. In By using the above adjustment, the operator may fit can  
14       tightly fit a new paint roller that has having a different length from the replaced one on  
15       the frame, and then rotate the outer pipe 6 on the inner pipe 5 to tighten the inner pipe 5  
16       for enhancing the coupling force between the joint parts of the pair of square arms 2 and 4  
17       and the square tube 1. Operator The operator may also fix a handle 11 into the screw  
18       socket 15 and further tighten it with the screw tube 10.

## ABSTRACT OF THE DISCLOSURE

**ADJUSTABLE FRAME FOR HOLDING PAINT ROLLER**

An adjustable frame for holding a paint roller **comprising:** includes a pair of square arms, each. Each of the pair of square arms includes a distal part, a joint part, a pair of shafts at the ends of the distal parts, and a pair of racks which that are opposite to each other and are respectively fixed at the ends of the joint parts; and a. A straight square tube which holds to the pair of joint parts and holds the pair of racks into its internal space; the. The pair of racks meshing mesh with a gear wheel within the internal space of the square tube; a. A tee-joint which holds to the square tube, a. A pair of bearing holes through their the walls of the tee-joint and the square tube holding hold up a bar, to which the gear wheel is fixed; and one. One knob **being** is fixed to one of two ends of the bar, outside the wall of the tee-joint. The present invention provides a holding-length adjustable frame that is capable of flexibly and tightly clamping and holding a variety of longitudinal sizes of longitudinally sized paint rollers.